Naval Training Systems

Live Training

NCMI Major Advantages

- Maximizes the cost-effectiveness of naval training by high-fidelity simulation of virtual seaborne and airborne platforms
- High level safety achieved by a dedicated training mode ensuring vessel's safety of operation
- Multi-layer high-efficiency data-link capabilities using a range-less training and a coherent picture among training participants (vessels and aircraft)
- Conducts full-scale bilateral joint force exercises easily conducted by utilizing cost-effective virtual training platforms

NCMI Key Features

- Includes an advanced and patented data link protocol enabling the distribution of the virtual arena information over a multi-band (S-Band, HF, SATCOM) highly efficient data link network. This data link protocol can utilize existing on-board RF equipment while saving new RF equipment costs
- Caters of large scale distributed exercise including dozens of real platforms (naval and airborne) and hundreds of smart computer generated forces
- The NCMI supports high-fidelity and high-rate simulation models (from 10 the 100 Hz per simulation cycle)
- Provides a solution for naval warfare exercises both at sea and ashore
- Integrates virtual platforms in a real seaborne exercise to provide a hybrid simulation training mode
- Interfaces to various combat systems providing realistic input to C⁴I, RADAR, EW, Sonar, weapon systems and more
- Sensor detection algorithms allows the presentation of the virtual platforms on real sensors using detection algorithms based on the sensors' true physical characteristics
- High-fidelity weapon simulation models of real and virtual engagements
- Kill assessment calculations and evasion maneuvers
- Interfaces with other training systems, providing a complete warfare simulation [such as OBTS, Air Combat Maneuvering system (ACMI), Naval Tactical Trainers (NTT), etc.]

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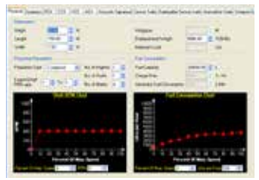
Naval Combat Maneuvering Instrumentation (NCMI)

On Board Naval Training System (OBTS)

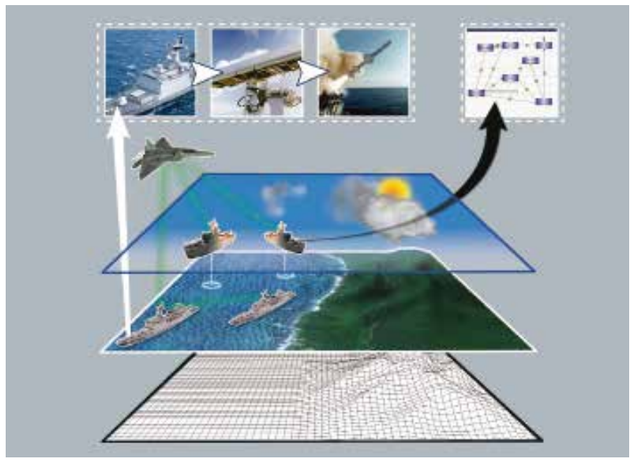
Modern naval combat requires a high-level of expertise in all modes of litorral and maritime warfare.
NCMI is a live training system that instruments the different combat systems and stimulates superimposed detections of virtual targets while displaying actual detections on the operational systems.
The coherent exercise situation is distributed via a dedicated data-link simulation network to all participants.
NCMI is a full-scale ready-to-run on-board training system (OBTS) providing advanced OBTS both ashore and at sea.

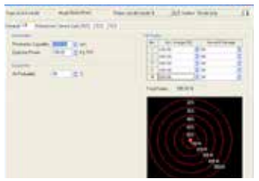


Advanced Computer Generated Forces (CGF) serve as the exercise virtual platforms. Easy instruction of virtual platforms follow a mission-script and react to unexpected events according to warfare doctrines.

The simulation is knowledge-base driven. New threats, sensors or platforms can be easily adopted as they are introduced into the arena.

3D mission rehearsal and debriefing on a PC-based ground station, includes a cutting edge “what-if” hypothesizer tool.





High-end kill assessment algorithms utilized in real-time per engagement. Simulation of damage and its impact on platform capabilities.

Real-time monitoring and control enables wide range of capabilities such as: control over the environment, introduction of new virtual forces, tactical picture compilation analysis, etc.

Dedicated multi-layer simulation data-link distributes real-time tactical situation to all participants at sea and ashore enabling full exercise control and monitoring of every station.

The NCMI system includes advanced safety mechanisms and interlocks enabling advanced onboard training at sea while monitoring all training aspects safety precautions for weapons, sensors and navigation